

What is claimed is:

1. A semiconductor integrated circuit device,  
comprising:
  - a semiconductor substrate;
  - 5 a multilayer interconnection layer provided on said semiconductor substrate;
  - an integrated circuit portion provided in a surface of the semiconductor substrate and in the multilayer interconnection layer;
  - 10 a temperature monitor portion provided at a higher level than the multilayer interconnection layer, the temperature monitor portion having electric characteristics that are changed in accordance with a temperature; and a detector section, connected to the temperature monitor portion, operable to detect the electric characteristics of the temperature monitor portion to measure the temperature.
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2. The semiconductor integrated circuit device according to claim 1, wherein  
20 said integrated circuit portion is controlled based on an output from the detector section.
3. The semiconductor integrated circuit device according to claim 1, wherein  
25 at least a part of the integrated circuit portion is arranged directly below the temperature monitor portion.
4. The semiconductor integrated circuit device according to claim 1, wherein  
a plurality of said temperature monitor portions are

provided to detect the temperatures of a plurality of positions.

5. The semiconductor integrated circuit device according to claim 1, further comprising a bonding pad  
5 provided at the lower level than the temperature monitor portion.

6. The semiconductor integrated circuit device according to claim 1, wherein

the temperature monitor portion is formed of a  
10 material having a resistance that changes in accordance with the temperature, and the detector section detects the resistance of the material.

7. The semiconductor integrated circuit device according to claim 6, wherein

15 the material is a metal oxide.

8. The semiconductor integrated circuit device according to claim 7, wherein

the metal oxide is vanadium oxide.

9. The semiconductor integrated circuit device  
20 according to claim 6, wherein

the material is formed in a shape of sheet.